

Partners plan for fishery's future in Biscayne National Park

by Todd Kellison and Rick Clark

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LOCATED ON THE SOUTHEAST COAST OF FLORIDA, Biscayne National Park is the largest marine park in the National Park System, with 95% of its 173,000 acres covered by water. The park's diverse marine habitats include expansive coral reefs, seagrass meadows, and mangrove fringes that support productive fish and invertebrate communities. Like many coastal systems worldwide, the waters encompassed by the park have been subjected to the impacts of human influence, including population growth and related recreational and commercial fishing pressure.

Concerns about the condition of Biscayne's fishery resources became apparent in 2001, when a "Site Characterization" report concluded that approximately 70% of targeted species were overfished and that the number and size of most of the key targeted species appeared critically low within the recreational fishery. It also stated that exceptionally high and sustained exploitation pressures seem to have precipitated "serial overfishing" of key fishery resources, where depletion of a targeted species leads to the targeting and subsequent depletion of other species. Preliminary results from a fish and habitat census conducted by Drs. Jerry Ault (University of Miami) and Jim Bohnsack (National Oceanic and Atmospheric Administration and National Marine Fisheries Service) in May 2002 reinforced these findings, indicating that the size of reef fishes such as groupers and snappers was smaller in Biscayne than in areas characterized by lower fishing pressure. Ault said, "It took me ... 24 dives in Biscayne National Park before I saw my first legal-sized fish, either snapper, grouper, or grunt." In tandem with long-term monitoring

data at the park, these studies suggested that fishery resources were in need of prompt and diligent management efforts.

Given the park's mandate to conserve its resources for future generations, Biscayne is in the process of developing a fishery management plan to improve its long-term ability to manage and conserve fishery resources. The plan is the first of its kind in the National Park Service to be based on quantifiable desired future conditions (i.e., specific conditions to be met regarding size and abundance of fishery populations, issues related to catching nontarget species, fishing gear impacts on essential fishery habitats, and visitor experience), and will include a range of management alternatives that, when initiated in 2003, will directly contribute to the long-term protection and perpetuation of Biscayne's marine resources.

Critical to the success of the plan's development and future implementation have been the inclusion of public input, the establishment of a groundbreaking memorandum of understanding with the Florida Fish and Wildlife Conservation Commission, and the development of partnerships with the National Marine Fisheries Service and the University of Miami. In concert with the National Park Service, these partners share an interest in contributing to and supporting inter-agency and regional strategies to manage stocks of fish as a biological unit, transcending state and federal jurisdictional boundaries. This approach recognizes that measures to end overfishing and to rebuild stocks are most effective when implemented over the range of the biological stock and not limited to jurisdictional boundaries. As such, the cooperative approach underlying the development and implementation of the fishery management plan provides an excellent protocol to develop strategies for responsible management and conservation of fishery and other consumptive resources within the National Park System. ■

Scientific surveys of key reef species such as grouper (right), snapper, and grunts indicate that the abundance and size of these species have declined because of increasing fishing pressure. With the support of state, federal, and university partners, the park is developing a fishery management plan to address overfishing and rebuild fish stocks.



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